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ABSTRACT

Professional educators must be aware of issues involved pertaining to the development of relevant objectives, learning experiences, and evaluation procedures to be used in teaching-learning situations, and these issues should be clarified in terms of the thinking of selected educators of the past as well as leading professionals in the field of education today. The major concepts for consideration in elementary curriculum development are: (1) the concept of the learner; (2) the content of the curriculum; (3) the objectives of the curriculum; (4) the learning experiences selected to achieve objectives; (5) the sequence of learning experiences; and (6) the evaluation of achievement. (DS)

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ISSUES IN DEVELOPING THE RELEVANT ELEMENTARY CURRICULUM

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PREFACE

ISSUES IN DEVELOPING THE RELEVANT ELEMENTARY CURRICULUM has been written for both preservice and inservice education of teachers, administrators, and supervisors. Professional educators must be aware of issues involved pertaining to the development of relevant objectives, learning experiences, and evaluation procedures to be used in teaching-learning situations. These issues must be clarified in terms of the thinking of selected educators of the past as well as leading professionals in the field of education today.

Teachers, supervisors, and administrators should continuously study issues in education in order to provide the best in learning experiences for each individual learner.

Marlow Ediger

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CHAPTER ONE

CONCEPT OF THE LEARNER

Throughout the history of education, educators have held diverse concepts of the learner. Each teacher, supervisor, and administrator adheres to selected beliefs pertaining to human beings. Objectives, learning experiences, and evaluation techniques are selected due to holding these beliefs about learners.

The Puritans who arrived in colonial New England in 1630 had developed selected beliefs pertaining to the individual. Children, it was felt, had been born in sin. Adam and Eve in the Garden of Eden had eaten of the forbidden fruit, according to the Old Testament account in the book of Genesis. Since the forbidden fruit had been eaten, they were driven out of the Garden of Eden. Thus, Adam and Eve had sinned and human beings were born in sin, according to the Puritans. If a child is born in sin, he is thus an evil individual. Thus, to become good, the evil must be driven out of human beings.

From these basic beliefs, a specific curriculum was developed for pupils. To read the Bible effectively and understand Puritan doctrine would be the ultimate goal of education. To realize this broad general objective, pupils would, first of all, use the Hornbook as a learning activity to achieve the objective. The Hornbook consisted of one page containing capital and small letters of the alphabet as well as the Benediction and the Lord's Prayer. Memorization of content was the major method of teaching. Thus, pupils would memorize the letters of the

alphabet, the Benediction, and the Lord's Prayer in beginning learning. Ultimately, pupils would learn to read the Bible. Church and state basically were one. The state was to aid the church in implementing its goals and ideals.

The following implications may be drawn from the thinking of the Puritans pertaining to educating the young:

1. Knowledge of the Bible would guide learners in becoming good individuals.
2. Physical punishment could be used to drive evilmindedness out of children and provide motivation for learning. (Rote learning would not be a stimulating approach to learning; physical punishment could serve as a motivation in demanding that pupils learn.)
3. Biblical laws and information were superior to man-made knowledge.
4. Correct knowledge and beliefs are possible to develop on the part of individuals.

Prior to the days of the Puritans in colonial New England, many other philosophers had written about the importance of the Christian religion in the curriculum of life. Augustine (354-430) wrote about eternal truths which individuals are to accept by faith. Loving God then would be the highest good. What is observed through the senses is greatly inferior as compared to knowledge about God.

St. Thomas Aquinas (1225-1274) also believed that knowledge of God was the individual's ultimate goal in life. Truths pertaining to God were too complex to understand. Thus, faith in God was of utmost importance.

Mind as a Blank Sheet at Birth

John Locke (1632-1704) did not believe that children were born as

evil individuals. His thinking was that the mind of the infant is like a blank sheet at birth. Thus, quality experiences are important for individuals. These experiences will then be registered in the mind. In John Locke's writing, Some Thoughts Concerning Education, he stresses the importance of quality experiences for pupils with the following examples:

1. Physical punishment hinders in positive development of individuals.
2. Parents should teach children by example rather than through the presenting of many rules and regulations.
3. Learning for children should be an enjoyable experience.
4. Play is important for children.
5. Adults should reason with children in a respectful way.
6. Curiosity must be stimulated within children.

John Locke felt and thought that experiences imprint themselves in the mind of each individual. Thus, it is important that children have positive experiences in life in order to print these upon the mind, which is like a blank sheet at birth.

Johann Frederich Herbart (1776-1841) developed a rather thorough approach to teaching based upon psychological foundations of how individuals learned. Herbart believed that the infant was born with a mind like a blank sheet. The environment of human beings would be very important since it alone provided learnings for individuals. The quality of experiences which individuals had would determine the future goodness or badness for each person. With the mind being like a blank sheet at birth and the environment being of utmost importance, Herbart stressed the importance of the teacher in the teaching-learning situation. The teacher

would need to study students carefully in order to provide learnings which would benefit each learner.

Herbart has been credited with advocating the developing of lesson plans when teaching students. His thinking pertained largely to teaching students on the secondary level. The very first part of the lesson plan would pertain to what was called "preparation." Here, the teacher was to help pupils review what was learned previously. Herbart felt that pupils' thinking would not be clear unless they had a chance to review that which had been learned yesterday or at earlier times. Preparation of the mind or review was important if students were to have ideas which were clear and useful.

Pupils would not develop new learnings if the step of "preparation" was emphasized only. Thus, teachers needed to present new learnings which would be called "presentation." The teacher needed to be careful in selecting new learnings which pupils were to develop. These new learnings would be accepted best if they were of interest to the student. The careful selecting of new learnings also would be important in that the environment imprinted itself on the mind of the learner. If students were to develop well, the environment created by the teacher was of utmost importance. Students were ultimately to develop into good citizens with high moral qualities, according to Herbart.

Many fragmented ideas could become a part of the child's learning experiences unless the teacher helped pupils to make proper "associations." In this step of teaching, according to Herbart, the teacher would help students "tie together" or relate the new learnings obtained with the old learnings. This would have a tendency to eliminate the isolated or

unrelated learnings that pupils could develop.

From the association of new learnings (step of presentation) with that of the older learnings gained (step of preparation), students would then develop generalizations. These generalizations (step four in the lesson plan) would be used in different ways by students, thus bringing in the final step in teaching as indicated in the lesson plan.

Herbart developed a set of ideas pertaining to teaching which, no doubt, were well ahead of their time. Emphasis was placed upon how learners learn and the teacher's responsibilities in the teaching act.

Infants Born as Good Individuals

The Puritans felt that infants were born in sin. John Locke felt that individuals were neither good nor bad at birth. They were neutral due to the mind initially being as a blank sheet. Toward the other end of this continuum, Jean Jacques Rousseau (1712-1778) felt that infants were born as good individuals as they come from God. The infant must be nurtured as a gardener would take good care of plants. Rousseau believed in using real life-like experiences through which pupils would learn. Concrete and not abstract experiences would be important for learners. Learning through the use of the senses would be of utmost importance; nature always determines what is best for individuals, according to Rousseau.

Frederich Wilhelm Froebel (1782-1852) also made many important contributions toward educational thought with his ideas pertaining to the teaching of kindergarten pupils. While Herbart placed major emphasis upon the importance of the teacher in teaching students, Froebel emphasized

the pupil as being of major importance in the teaching-learning act. Froebel felt and thought that pupils were born as good individuals. Jean Jacques Rousseau had, prior to this time, also emphasized that individuals are born as being good and not evil or sinful. The Puritans in Colonial New England had held to the ideas that infants were born in sin and thus evil had to be driven out from within individuals.

Since Froebel felt that infants were born as good individuals, creative endeavors and products of pupils were of utmost importance. That which is within individuals should be brought to the surface. According to Froebel, the teacher should set the stage in having pupils be creative. This would be completely opposite of drilling pupils on subject matter or emphasizing rote learning. Instead, the teacher would encourage pupils to develop unique ideas and products. The teacher, of course, could not dictate to pupils what was to be learned. Froebel felt that pupils would learn much from an interesting and stimulating environment. There would be no time or desire for misbehavior on the part of learners when engaging in interesting learning activities which emphasized creative endeavors.

Specific materials and learning activities were advocated and used by Froebel in teaching kindergarten pupils.

Beliefs Pertaining to Learners

The newly born infant certainly learns much in the preschool years as well as later on. The environment of the infant will aid in determining the total behavior of the child. For example, the child will learn to speak standard or nonstandard English depending upon what exists in the environment in terms of standards. He will also learn the following

depending upon what exists in the environment:

1. ways of greeting and meeting people.
2. desirable foods to be eaten.
3. kinds of homes which are desirable.
4. ways of behaving with diverse groups of individuals.
5. the desire or lack of it to move upward on the socio-economic ladder.

Thus, the environment is very important in helping to determine an individual's total development. It almost appears that the environment determines the total product of what becomes known as the human being.

Other forces seem to be at work,also, in developing human beings in addition to the environment. Thus, individuals, regardless of the quality of environment they come from, exhibit behavior in degrees which may be categorized as good or bad. Thus, behavior such as the following can be noticed in degrees on the part of all human beings:

1. being kind or rude to others when expressing ideas and content orally.
2. helping or refraining from helping people materially or financially who are in need of the necessities of life.

Other examples may be given which would represent more in its extreme form the goodness-neutral-badness continuum.

Continually, generalizations and objectives pertaining to the "good" individual must be developed. Means to achieve these selected ends must be inherent in teaching-learning situations in the school setting as well as in life.

In Summary

One can think of concepts pertaining to learners as being represented on a continuum. Toward one end of this continuum, Puritans basically believed that children were born in sin. On the opposite end of this continuum, Rousseau and Froebel believed that individuals were born as good individuals. Somewhat toward the middle of these two opposing points of view pertaining to the nature of children, Locke and Herbart believed that the human mind was like a blank sheet at birth, and thus the environment recorded on this blank sheet.

In teaching-learning situations, it is important to provide for all children to help each achieve optimum development. Goodness and badness, no doubt, come in degrees on the part of individuals. It is difficult to determine if a deed or act has been good or bad in many situations. For example, an individual may have perceived the intent or behavior of selected individuals as being negative whereas the majority of observers may have had positive feelings toward that same revealed behavior. Thus, a particular teacher may feel that a selected child in the class setting is a behavioral problem whereas other teachers have perceived the same learner to exhibit tendencies pertaining to creative behavior. Unique, original, and novel ideas may be presented by these pupils when perceiving gaps in knowledge and learning experiences.

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CHAPTER TWO

CONTENT IN THE CURRICULUM

A frequent question that arises pertains to what should be taught in terms of content in the curriculum. This is a problem that pertains to scope and sequence. Johann Frederich Herbart (1776-1841) felt that literature and history would be the most important curriculum areas in the public schools. These curriculum areas would aid students in developing good moral character. Jean Jacques Rousseau (1712-1778) believed that science (the natural environment) should provide major learnings for pupils. Johann Heinrich Pestalozzi (1746-1827) felt that real objects and the real environment should be the major source of learnings for pupils. The Puritans in Colonial America placed emphasis upon the Bible as being the major source of content for pupils. Thus, the question arises as to what pupils should learn and when this should be learned.

Certainty of Content to Be Learned

There are selected educators who are fairly certain pertaining to content that should be learned by pupils. The Essentialists under the leadership of William Chandler Bagley (1874-1946) believed that learnings could be identified which pupils were to develop. The three R's, history, English, as well as discipline and obedience, were important in the curriculum. Thus, a core of content exists which pupils should learn and master.

Advocates of behaviorally stated objectives feel that content generally can be identified which pupils are to master. Behaviorally stated objectives generally are written prior to teaching a given set of learners. These objectives are written with much precision. Thus, it can be observed and measured if these kinds of objectives have been achieved. Notice the following measurable objectives:

1. The pupil will list in writing the names of ten states in the United States.
2. The pupil will write a fifty-word paragraph on customs of Puritan colonists in the New World.
3. The pupil will read a one hundred-word essay on westward expansion in the United States and state two facts and two opinions contained in the writing.

Behaviorally stated objectives can be written on the recall of information level or on complex levels of thinking. Each of the above objectives indicates that after teaching a given set of learners, it can be measured if the objectives have or have not been achieved. Prior to teaching then, the teacher generally selects what learners are to learn. Thus, certainty exists in the mind of the teacher as to what pupils are to learn. The teacher selects content which pupils are to master.

Educators today are questioning more and more as to the degrees of certainty as to knowing and selecting content which learners are to learn.

Humanistic Objectives in Education

Humanistic education emphasizes the development of the attitudinal dimension of individuals. Thus, in learning pupils must have a chance

to engage in decision making as to what is to be learned as well as the media to use in learning. To be sure, the teacher or teachers should have adequate opportunities to structure the learning environment in a certain direction. However, within that structure, pupils have opportunities to determine objectives and learning activities. They also have opportunities to assess their own achievement.

Learners are assisted in developing well socially and emotionally in that concern for others is an important objective to achieve. Thus, the affective, attitudinal, or feeling dimension becomes important in developing. Developing the self concept of the learner becomes equally important. The learner basically will select tasks that are of interest and can be completed successfully. Joy in learning must be in evidence. The learning activities are selected, basically, on what appears to be relevant to the learner. Interest, relevancy, and success in learning are viewed from the child's unique perception. Thus, in selecting content to be learned in the humanistic approach to learning, the child can be a major determiner when decisions are made. There is less certainty as to which content pupils are to learn when stressing humanistic education as compared to the use of behaviorally stated objectives.

Content and Programmed Learning

In programmed learning, the programmer would decide upon what pupils are to learn. The sequence or order of these learnings would also be determined by the programmer. Thus, once the learner is ready for utilizing selected programmed materials, he would in using printed materials containing illustrations follow the following pattern, as an example, in

learning:

1. Read selected content and view the related picture or pictures.
2. Respond to an item, such as a completion item.
3. Check the response or responses given.
4. Correct answers given by students may be its own reward.
5. If responses given were incorrect, the learner now knows the correct answer.

Thus, in determining content to be learned, the programmer in programmed materials would determine what learners are to learn and in what order. There seems to be considerable certainty in terms of what pupils are to learn as perceived by the programmer.

Content and the Structure of Knowledge

Selected educators in the United States strongly emphasize that pupils inductively develop structural ideas as identified by academicians. For example, social scientists from colleges and universities would identify major generalizations from their areas of specialty. Thus, key structural ideas would come from historians, geographers, political scientists, sociologists, anthropologists, and economists. Learners on the public school levels would realize these ideas inductively on their own understanding level. Pupils would understand these ideas on a more complex level, continuously, as they progress through the public school years. Learners would also use the methods of acquiring and assessing information as emphasized by these specialists in the social sciences. Thus, if pupils worked as historians, an ample number of primary sources among other learning experiences, would be utilized in gathering data. Or, pupils working

as geographers, would utilize maps and globes adequately, among other sources, in gathering and recording data.

The structure of knowledge approach in providing content for learning emphasizes degrees of certainty as to content which pupils are to learn. College and university professors then would need to identify and agree upon as to what the structure of knowledge is in each of the identified disciplines of content.

Problem Solving in the Curriculum

All individuals face major as well as minor problems in life. Problems in society can be identified. Questions arise when considering and observing the environment. From these problems and questions, related information may be gathered in terms of solutions. Hypotheses or answers are then obtained in relation to the problem or question. Ultimately the hypotheses are accepted, modified, or refuted. These steps would generally represent a framework for describing problem solving situations in learning. John Dewey (1859-1952) was a leading advocate in emphasizing problem solving situations in the curriculum. Problem solving would indicate the need of information from any and all academic disciplines and curriculum areas as long as it is relevant in realizing solutions. Thus, subject matter is used in solving problems. Disciplines or academic areas used in solving problems have their importance as they aid in working toward solutions. Knowledge then is selected on the basis of being useful in solving problems. Thus, content is important in terms of problem solving activities in the school setting as well as the curriculum of life. Content then cannot be selected in terms of what will be relevant prior to identification

of relevant problem areas. Once the problem areas have been identified, subject matter becomes important in terms of realizing desired solutions.

Content and the Learner

It is important for pupils to develop relevant understandings, skills, and attitudes. The question arises as to what is relevant for pupils to learn. There certainly are disagreements in thinking when educators attempt to answer this question. It is important to be able to solve personal problems as well as problems that exist in society. Only then can individuals improve their lot as productive members in society. Content used in problem solving is relevant to the problem being pursued. Thus, in problem solving activities, it cannot be determined with certainty as to what content is relevant for all learners in the school setting or in life.

Learners' interests vary from individual to individual. Thus, it appears that ample opportunities should be given to learners in making decisions pertaining to what to learn. Since learning styles differ from pupil to pupil, it would be sound to have learners engage in decision-making as to how desired learnings are to be achieved.

Academicians on the college and university level can make tremendous contributions in terms of identifying content pupils are to learn. Their recommendations would also pertain to pupils utilizing methods of gaining knowledge that specialists in the diverse disciplines use. Pupils could select tasks in learning where these structured ideas are developed inductively using procedures recommended by academicians.

Learners have diverse learning styles; thus, it may be of benefit to selected learners to utilize programmed materials in developing relevant understandings, skills, and attitudes.

In Summary

The history of education states which curriculum areas or skills were perceived to be of utmost importance in learning as determined by selected famous educators. A few selected educators emphasized which discipline or curriculum area was most important for learners to master content in. Thus, Herbart, for example, felt that literature and history would be the most relevant curriculum areas for learners.

More recent approaches in determining relevant content for learners pertain to the following:

1. The teacher, as well as principals or supervisors, determining prior to teaching what pupils are to learn.
2. Pupils deciding what to learn as well as the media of learning within a framework largely determined by the teacher.
3. Programmers determining what pupils are to learn and in which sequence these learnings are to be obtained.
4. Academicians identifying key structural ideas for pupils to achieve utilizing methods of procedure recommended by specialists in the diverse disciplines.
5. Pupils with teacher guidance identifying relevant problems or questions from a stimulating environment, thus working in the direction of obtaining possible solutions.

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CHAPTER THREE

OBJECTIVES AND THE CURRICULUM

Selecting educational objectives is an important task for educators. Certainly, objectives need to be selected which appear to be relevant for learners. Learners should perceive these objectives as being important and purposeful to achieve.

Objectives pertain to what is valued highly in society. Thus, objectives are selected by human beings in terms of what is perceived to be important for learners to accomplish. The question arises as to who should determine these objectives.

Objectives and the Learner

Educational objectives could be selected in terms of what pupils indicate is of interest to them. The teacher can get data pertaining to pupil interest by listening to comments made by learners during time devoted to discussions and conversations. Pupils could also reveal their interests in a questionnaire or in writing. Learning centers could be developed by pupils with teacher guidance. Tasks for each of these centers could be developed cooperatively between pupils and the teacher or teachers. Thus, pupils would be conceived as being very important in teaching-learning situations pertaining to the selection of objectives of instruction. Thus, a child centered curriculum could truly be in evidence.

Objectives then which pupils are to achieve should reflect end

results which learners would be interested in achieving. These objectives could be precisely stated. They could also be broader and more general in terms of stated intents.

Objectives from Society

Many educators would say that the selection of educational objectives should go beyond the choices of learners. Thus, teachers, administrators, and supervisors would attempt to discern what exists in society which is relevant and would be important for pupils to learn. What is selected for pupils to learn would be adjusted to the present achievement levels of learners.

It is difficult to agree as to what should be taught when studying trends in society. There are many, many happenings in society. For example, the following, among others, exist in terms of happenings on the world scene: wars between and among nations, inflation, unemployment, disagreements between and among the races, automation and inventions, industrialization and urbanization, an increasing number of developing countries, independence for selected countries, an increased number of nuclear power countries, more effective means of transportation and communication, new feats in space travel, earthquakes and other forces involved the changing surface of the earth, natural disasters hindering man's accomplishments, and pollution. It is indeed difficult to determine which objectives to select from a study of the many societal trends. For example, if a unit on industrialization and urbanization is selected as being important to teach, which objectives pertaining to that selected unit should be emphasized in teaching-learning situations? In any unit

that is taught, there is much knowledge that pupils may learn in terms of understandings objectives. Skills and attitudinal objectives should also be stressed in teaching-learning situations.

Objectives from Subject Matter Specialists

It is important to consider the contributions of subject matter specialists when determining educational objectives. The identification of the structure of knowledge by academicians would emphasize subject matter specialists contributing to the selection of educational objectives. These academicians would come generally from the college or university level. In the area of science, these subject matter specialists would identify structural ideas in academic disciplines such as botany, biology, zoology, chemistry, physics, genetics, geology, and astronomy. These structural ideas may then become available to teachers who would have learners achieve these key ideas inductively.

In having academicians identify structural ideas; there would, of course, be a tendency to weed out irrelevant content, from the subject matter specialists' point of view. A major problem would exist if pupils were to develop learnings based largely on the structure of knowledge concept. For example, learners' interests are also important in determining what is to be learned. Questions that pupils raise in class settings also pertain to objectives in education. Solutions to these questions need to be sought using a variety of learning experiences. It is of utmost importance to consider suggestions and recommendations that subject matter specialists have pertaining to the selection of educational objectives. However, the interests and purposes of learners must also be

considered when selecting educational objectives.

The essentialist movement in education advocated a subject centered curriculum. They would say that careful selection of subject matter known to be important is basic to developing relevant learnings for pupils. Objectives for teaching-learning situations, from the essentialist point of view, would come largely from a careful study of subject matter from major disciplines of study.

Teachers, principals, and supervisors should also study subject matter content thoroughly to determine relevant objectives for different curriculum areas. Thus, learners can be aided in achieving important objectives in the curriculum.

There are selected questions which may be asked pertaining to content which pupils are to learn:

1. From whose point of view should the content be relevant? The child? The teacher? The subject matter specialists?
2. How should subject matter be sequenced?
3. Should subject matter learnings be developed in relation to problem solving activities only or should content be learned as being relevant in and of itself?
4. What kind of balance should there be between pupils developing learnings inductively as compared to deductive learning?
5. How can balance be developed and maintained between and among the different curriculum areas in the public schools?

Objectives from a Democratic Philosophy

Objectives need to be selected from carefully evaluated statements

pertaining to democratic living. Democratic living pertains to ideals which may come about in everyday situations in life. Thus, for example, the following ideals could be emphasized in situations involving human interaction:

1. Persons respecting each other regardless of creed or socio-economic levels.
2. Individuals being able to obtain and participate in the good things of life.
3. Humans being concerned about improving the lot and situations of others in life.
4. Individuals working toward self-enhancement or enrichment of their own lives.
5. Persons being prone to identify and select problem areas which need solution, such as in cases of war, poverty, inequities, irrational thinking, bias, and prejudice.
6. Individuals working together for the common good of all.
7. Human beings developing abilities to think critically and creatively pertaining to problems in the environment.
8. Individuals selecting satisfying vocations and leisure time activities.

Each of the above statements pertaining to democracy as a way of life can be written as an objective. For example, in statement number one above, the resulting general objective would read: To develop within the pupil feelings of respect toward others.

Following the identification and selection of objectives pertaining to democratic living, the teacher must choose learning activities which

will guide learners in achieving these desired ends. In the following objective - To develop within the pupil feelings of respect toward others - the teacher may select learning activities such as the following in guiding learners to achieve this goal:

1. Teacher-pupil planning will be utilized to develop standards of conduct in the classroom emphasizing democratic living.
2. At specific intervals pupils with teacher guidance will assess if these standards are being realized.
3. Learners may work in committees of their own choosing pertaining to areas of study based on ongoing units of study.
4. Specific problems pertaining to the nonuse of democratic behavior will be identified and used as learning situations to enhance the development of all learners.

Issues in Determining Objectives

There are many issues involved in identifying and determining objectives in the curriculum.

1. Who should largely determine these objectives? The child? The teacher? The programmer? Academicians?
2. How much should the child's needs and interests be emphasized in objectives? How much of society's purposes should be stressed? To what extent should subject matter specialists determine objectives?
3. How can balance in objectives be developed and maintained among understandings, skills, and attitudinal objectives?
4. Should objectives be stated as general objectives, or should

they be behaviorally stated?

5. Can relevant attitudinal objectives be stated behaviorally?
6. Can higher levels of cognitive domain objectives be stated behaviorally such as problem solving, critical thinking, and creative thinking?
7. Can teachers adequately evaluate pupil achievement if goals are stated as general objectives?

Specific, Measurable Objectives

Objectives which learners are to achieve should be stated as precisely as possible without sacrificing relevancy in written statements of goals. Attitudes and feelings such as the following are important to develop within learners and yet specificity may be difficult to implement when writing these objectives:

1. respecting others and oneself.
2. appreciating contributions of others.
3. having feelings of an adequate self.
4. desiring to express content creatively.
5. wanting to participate in committee work.
6. desiring to be of positive assistance to others.

Skills objectives pertaining to the following may also be difficult to write where measurable objectives are ultimately in evidence:

1. Identifying and selecting of relevant problem areas for solution.
2. Engaging in critical thinking when separating fact from opinion, accuracies from inaccuracies, and fact from fantasy.
3. Presenting unique, new ideas in terms of hypotheses and solutions to problems.

Advocates of specific, behaviorally stated objectives emphasize that clarity in intent is very important when writing these kinds of goals for learners to achieve. Thus, little or no leeway exists in interpreting what will be taught when examining objectives which are behaviorally stated. Also, the teacher can evaluate the effectiveness of learning activities utilized in terms of learners achieving the specific behaviorally stated objectives. Thus, it can be measured or observed if pupils have achieved desired objectives.

It is relatively easy to write behaviorally stated objectives pertaining to the lowest level of cognition, such as the following:

1. The pupil will list in writing the capital cities of four states in the United States.
2. The pupil will say orally the names of the five leading manufactured products in the United States.
3. The pupil will point to the location of five states in the United States on a map and say the name of each state as it is being located.

Teachers, principals, and supervisors should advocate not only cognitive objectives in teaching-learning situations but also psychomotor and affective objectives. Affective objectives are important to emphasize in teaching-learning situations. Achieving affective objectives, including positive attitudes toward learning, will guide and aid pupils in achieving psychomotor and cognitive objectives more effectively. Certainly important objectives such as problem solving, creative thinking, and critical thinking must be adequately emphasized in each ongoing unit of study.

General Objectives in Teaching-Learning Situations

Many educators recommend using general objectives in diverse units of study. The thinking here is that general objectives can be written more effectively than behaviorally stated objectives when relevant goals are stated. Furthermore, it may be difficult to write selected attitudinal objectives behaviorally whereas writing these goals as general objectives would be readily possible. The following relevant attitudinal objectives may easily be written as general aims:

1. To develop within pupils feelings of respect toward others.
2. To develop within a child feelings of an improved self-concept.
3. To develop within pupils an appreciation for ideas obtained through reading.

It, no doubt, is possible to evaluate if each learner is achieving the above objectives to some degree. Thus, for example, through careful observation and recording of findings, the teacher may evaluate if a child is improving in the following areas:

1. respecting others.
2. improving the self-concept.
3. appreciating ideas gained from reading.

The observer then, for each of the above objectives, would need to decide rationally upon what is meant by respecting others, improving one's self-concept, and appreciating ideas gained from reading. Thus, the evaluator can notice if each learner is continually respecting others more so presently than at earlier times. The same would hold true for improving one's self-concept as well as appreciating ideas gained from reading.

It is, of course, easier to measure if an objective has been achieved using behaviorally stated objectives as compared to general objectives. Notice the following behaviorally stated objective pertaining to critical thinking: Given a paragraph of seventy-five words, the pupil will identify two facts and two opinions on living in urban areas of Australia.

In the above objective, pupils can reveal if the behaviorally stated objective has been achieved by presenting two facts and two opinions on content that has been read. Thus, in general terms, it can be precisely measured if this stated objective has been achieved by individual learners.

Objectives and the History of American Education

Immanuel Kant (1724-1804) emphasized the importance of freedom for individuals. Choices are to be made in harmony with standards of morality. Human beings are accountable for choices made in life. Developing the moral individual would be a major objective to achieve on the part of individuals.

Johann Friederich Herbart (1776-1841) also stressed the importance of pupils developing well in terms of morality and character. Herbart felt that individuals must discipline themselves well in order to make appropriate moral choices in life. Learners could be aided in developing well through the study of noble individuals in literature and history, in particular.

Friedrich Froebel (1782-1852) felt that character development was an important ultimate objective for pupils to achieve. In a creative environment for learning, pupils would develop appropriate habits pertaining to good character. The environment for learning as emphasized

by Froebel would be much more permissive as compared to that recommended by either Kant or Herbart. Kant placed heavy emphasis upon disciplining children so that proper conduct would be a major end result. The teacher in Herbart's thinking was the dominant person in teaching-learning situations. The teacher then would present content which would help learners to turn out well as human beings.

Herbert Spencer (1820-1903) believed that what is learned should be highly useful to the individual. Spencer attempted to arrange objectives in a hierarchical order of importance for human beings. Thus, he believed that the following order or arrangement of objectives was important for individuals to achieve:

1. working toward self-preservation.
2. being able to make a living.
3. raising children properly.
4. being responsible in working toward improving society.
5. using leisure time effectively.

Change in Educational Objectives

Goals in education have certainly changed much since the colonial period of time in the United States. The Puritans in Colonial New England emphasized the importance of The Bible, God, and the hereafter in terms of ultimate goals for individuals to achieve. In contrast during the 1800's Herbert Spencer emphasized utilitarian values in education such as individuals being able to keep themselves healthy, earning a living, raising children properly, being involved in improving society, and using leisure time well.

There are many problems which must be identified in society. These

problems include war, lack of food, pollution, unemployment, inflation, lack of energy sources, equality of opportunity, segregation of people based on race or creed, lack of important natural resources, prejudice, and corruption. Thus, it would appear that the ability to engage in problem solving activities and develop proficiency in this area would be an important educational objective. In attempting to solve problems, data or information from a variety of sources must be evaluated thoroughly. Thus, critical thinking becomes important. In critical thinking, inaccurate statements are separated from accurate statements. Opinions are separated from substantiated facts. It is important for individuals to be able to think critically; otherwise solutions to problems may have little or no value. Generally, unique, new solutions are needed in problem solving situations. Too frequently, solutions that have worked for others in problem solving situations may not be appropriate for selected personal and social problems. Thus, creative thinking becomes an important goal in education.

Individuals must feel good about themselves in order to achieve to their optimum. Thus, to achieve well in problem solving situations involving critical and creative thinking, affective or attitudinal objectives need to be stressed in teaching-learning situations. Pupils must be successful in learning. The learner can then be guided in developing a better self-concept. The perception an individual has of himself or herself may ultimately determine the kind of exhibited behavior on the part of these individuals.

Good human relations is another important objective to emphasize in teaching-learning situations. Learners must develop needed skills in getting along well with others. Survival of individuals in many cases

depends upon the art of good human relations. Uncomfortable situations arise when strife, friction, and dissension are inherent when individuals are interacting with each other.

In Summary

Goals in education have changed much over the centuries in American education. These goals have included developing the Christian individual and developing persons with good moral character. Developing the moral individual still remains as an excellent objective in American education. Perhaps, standards of morality are best developed through the skills of problem solving, critical thinking, and creative thinking. To achieve each of the above skills, an individual needs an appropriate self-concept and to be able to work harmoniously together with others.

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CHAPTER FOUR

LEARNING EXPERIENCES TO ACHIEVE OBJECTIVES

Once, ends or objectives have been identified for learners to achieve, learning experiences need to be selected which will guide pupils in achieving the desired goals. In the United States, there certainly is diversity in terms of the kinds of experiences available for pupils. Thus, pupils may achieve objectives through interacting with reading materials, films, filmstrips, slides, tapes, excursions, television, art activities, construction activities, games, simulated materials, music activities, dramatic activities, and research activities. There is something missing, however, when writers merely list learning experiences in order that pupils may achieve objectives. Quality within these experiences must be considered not only in terms of achieving desired ends but also in terms of being meaningful, purposeful, and interesting to each child.

Religious Content in Education

The Puritans (1630-1776) in Colonial New England used the following experiences for pupils to achieve end results pertaining to knowledge and beliefs about God.

1. The Horn Book, consisting of one page, was used in initial instruction. The Horn Book consisted of the capital and lower case letters of the alphabet as well as the Benediction and the Lord's Prayer.
2. The New England Primer consisting of an illustrated alphabet, the titles of books of the entire Bible, the Ten Commandments, the

shorter Westminister Catechism, the Apostle's Creed, and the Lord's Prayer.

The major method of teaching utilized in helping Puritan children learn in Colonial New England was memorization of content. Thus, children would memorize the upper and lower case letters of the alphabet as well as the Benediction and the Lord's Prayer from the Horn Book. They would also memorize content from the illustrated alphabet, the Apostle's Creed, as well as memorize questions and answers from the Westminster Catechism. Ultimately, pupils would learn to read from the Bible. Motivation for learning could be implemented with the use of corporal punishment.

After the American Revolutionary War, the Lancastrian Monitorial System of Instruction became important in the United States. This system of instruction had its beginning in the United States in 1806 and lost out in importance approximately in 1853. Joseph Lancaster emphasized religious teaching in the curriculum but not nearly to the extent advocated by the Puritans. The curriculum advocated by Lancaster also broadened in scope to include arithmetic.

To save money in teaching, Joseph Lancaster advocated that a master teacher teach monitors and they in return would teach these same learnings to designated pupils. A monitor would generally teach six to twelve pupils. Charts along the walls were used to teach a set of pupils by a monitor. In reading instruction, a set of pupils could follow the following sequence in learning:

In class one, pupils would master the individual letters of the alphabet followed by learning of syllables containing two letters in class two. In class three, learners would memorize syllables and words made up of three letters followed in sequence in class four with pupils memorizing

words and syllables of four letters. Class five emphasized pupils mastering words of five and six letters whereas in class six pupils would read from the New or Old Testament.

Pupils would practice spelling and handwriting with the use of slates and sand. Spelling and handwriting were correlated with learnings gained in reading instruction.

Arithmetic instruction also emphasized different class levels. In class one pupils would add values of units and tens while in class two mastering simple addition was important. Class three would stress learning compound addition while class four emphasized learning subtraction. Class five stressed that pupils learn compound subtraction followed by mastering multiplication in class six and compound multiplication in class seven. Class eight would emphasize mastering work in division while in class nine pupils would study compound division.

Joseph Lancaster believed that pupils who did not have the desired motivation to learn could be motivated through embarrassment. Prizes were given to pupils who achieved in a superior manner. Memorization and rote learning were the major methods used in learning content.

Using Objects in Teaching

Horace Mann (1796-1859), first state secretary to the board of education in Massachusetts, had traveled to Prussia and observed Pestalozzian methods of instruction. Horace Mann wrote and spoke about the importance of Pestalozzian methods in the United States. Johann Heinrich Pestalozzi (1746-1827) emphasized the importance of using objects in teaching. Thus, the object lesson became very important for pupils. Learners would look at

a selected object or objects and tell about them in an informal manner. Pestalozzi believed that pupils should start with the concrete in learning such as objects and move on to the abstract such as telling about these objects in an informal manner.

In the area of arithmetic, Pestalozzi would have pupils count real objects when numbers are being added. Or, real objects would be used in studying subtraction. In the curriculum area of geography, pupils would view actual mountains, rivers, lakes, and hills and then make models of these geographical features by using clay. In science, real insects would be studied initially rather than delving into abstractions. Thus, Pestalozzi emphasized strongly that pupils use actual things that can be seen and touched before moving on to abstract learnings.

Pestalozzi emphasized not only the intellectual facets of a child's development but also the social and emotional. Children were to like school as a result of learning.

Robert Owen, a factory owner in Scotland, in the early 1800's developed an infant school for young children. Three major goals were emphasized in his school. These three goals were cleanliness, good human relations, and the playing of games. Thus, Owen advocated as learning experiences being clean physically, working together in groups, and becoming proficient in the playing of games. This was a radical departure from what many teachers were emphasizing in his day. Rote learning and memorization of subject matter were considered important by most teachers at that time. Robert Owen's ideas came to the United States in the early 1800's. His infant school level of instruction became the primary grade levels of instruction.

Dewey's Experimental School

John Dewey (1859-1952) started the University of Chicago Laboratory School in 1896. He had special movable furniture made for the laboratory school. At that time, desks were tightened to the floor. John Dewey believed that pupils should work in committees to solve perceived relevant problems. Dewey's child centered curriculum stressed the importance of studying the impulses of children when selecting learning experiences. One impulse was that pupils liked to work together rather than individually at learning tasks. This meant that desks, tables, and chairs had to be movable so that committee or group work was possible. Secondly, pupils liked to construct or make things as an impulse. Thus, in diverse learning activities, pupils would engage in the making or constructing of things and items relating to pupil purposes. Thirdly, the child likes to solve real problems rather than being told answers to questions or content pertaining to subject matter of the teacher's choosing. In the fourth impulse of children, a desire exists in being creative or artistic. Thus, a child centered curriculum would be planned based on these four impulses of pupils.

John Dewey strongly emphasized that the school setting should relate its learning activities to what exists in society. Thus, the school could emphasize in its learnings a miniature society. Dewey felt problem solving activities then would be important for pupils to pursue as learning experiences.

Selecting Learning Experiences

There is an important issue in education that needs further debate. This issue has to do with who is to select learning experiences for children. Certainly, a classroom too often is highly structured and the teacher then

determines which learning activities would be appropriate for children. Toward the other end of the continuum, pupils would largely select the learning activity to be pursued within a framework or structure. It appears that some degree of balance should be in evidence between the teacher alone selecting learning experiences for pupils as compared to pupils determing what is to be learned. Thus, pupils with the guidance of the teacher should select the desired learning activities in order to achieve intended objectives. Through teacher-pupil planning, learning activities may be selected which are beneficial to learners. The teacher, too, may structure the environment with possible learning experiences for pupils which appear to be interesting, meaningful, and purposeful.

Learning experiences for pupils should involve problem solving since life demands proficiency in this skill to solve personal and social problems. Reality certainly needs to be present in the environment so that pupils relate learnings in school to situations in life.

In Conclusion

There are many kinds of learning experiences available for pupils today. Thus, it behooves the teacher to involve pupils in determining and selecting these learning activities. It is important for pupils to learn to solve personal and social problems in realistic situations. Learning activities should capture the interests of pupils and be perceived as being purposeful.

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CHAPTER FIVE

SEQUENCE OF LEARNING EXPERIENCES

An issue that is important to consider in education pertains to who should determine sequence for pupils. Should the child do his own sequencing in learning? Is the teacher in a better position to determine order of learning for pupils? Or, can textbooks or programmers best assess sequence of learning for pupils?

Pupils Sequencing Learnings

There are many learning experiences whereby pupils sequence their own learnings. In individualized reading, the pupil selects the order of library books to be read. He may also choose how he wishes to be evaluated in terms of comprehending the contents of these library books. The child may reveal comprehension through dramatizing selected content from the completed book. Additional ways to reveal comprehension would be the following:

1. making a diorama or frieze.
2. having a conference with the teacher.
3. discussing the completed library book in a small group.
4. developing posters and individual pictures.
5. presenting an oral report to the class.

In open space education, the child can help plan different learning centers in the classroom. He may then choose what to learn from the different centers and thus sequence his own learnings. At the art center, the pupil may individually or in a small committee write about a selected picture

from a given set of illustrations. Or, learners may develop a frieze, mural, or diorama of their own choosing. The completed art project may relate to an ongoing unit of study.

At a second learning station pupils may select a filmstrip to view and discuss their observations. Thus, pupils are selecting a filmstrip of their own choosing and evaluating impressions gained. Other filmstrips are also selected for viewing and discussing.

A third learning center may emphasize dramatic activities. Thus, pupils could select what to dramatize from among suggested listings on a task card. Pupils then could plan, develop, and assess their own presentation. Later dramatizations could also be planned sequentially from the learners' perception.

A possible fourth learning station could pertain to a listening center. Cassettes and tapes would be available at this center for pupils to select in sequence. Purposes for listening could be listed on a task card at this center. Learners could select which purpose or purposes they would wish to listen for utilizing the cassettes and tape recordings.

Other possibilities for learning centers could include a speaking center, an object center, an experiment center, a map and globe center, and a reference center.

In utilizing concepts pertaining to open space education, the following criteria must be emphasized:

1. pupils selecting which center to work at.
2. learners selecting the kinds of learning experiences which are most beneficial.
3. pupils developing feelings of an adequate self-concept and being able to work harmoniously with others.

4. pupils sequencing their own experiences at the diverse centers of learning.

5. teachers exhibiting feelings of trust toward learners in a humane environment.

Teachers Sequencing Learnings for Pupils

The teacher may sequence learnings for pupils. For example, the instructor may wish to sequence experiences for pupils from a given lesson in the following order:

1. having pupils read silently pages 50-54 from the textbook.
2. asking pupils selected questions covering content which has been read.
3. showing a related filmstrip and discussing its contents with learners.
4. summarizing with learners major generalizations gained from the lesson.

Thus, the teacher is attempting to determine the best sequence of learning experiences for pupils when following the above order of activities for children.

The teacher may also write behaviorally stated objectives for pupils to achieve in a definite sequence. The following behaviorally stated objectives, as an example, could then be completed by learners in the order given in the school setting:

1. The pupil will list in writing the names of all colonies in the New England area.
2. Learners in a committee of four members will complete a frieze on happenings in colonial New England.
3. Each pupil will read a library book of his own choosing and report ideas gained to four other learners.
4. Using four reference sources, the pupil will write a report in his own words on a topic of his own choosing relating to colonial New England.
5. The pupil will pantomine a happening in colonial New England.

6. The learner will choose a character from colonial New England days and write daily diary entries for the chosen individual for two weeks period of time.

A variety of learning experiences selected by the child, by the teacher, or cooperatively by the pupil with teacher guidance, could be utilized in achieving the previously mentioned behaviorally stated objectives. Thus, the teacher has determined what pupils are to learn and in which order these learnings are to be developed.

Behaviorally stated objectives could also be written by the teacher in which pupils would determine the order that these goals are to be achieved. Pupils could even select which objectives to achieve when a minimal number are to be realized from a given set of goals.

Recommendations on Sequence of Educational Psychologists

Robert M. Gagné recommends that teachers very carefully determine sequential learnings for pupils. These learnings would be determined hierarchically and to some extent follow models of programmed learning. Repetition in learning, however, is not recommended. Thus, the teacher would need to order objectives so that pupils could achieve them sequentially. Pupils then, for example, would need to achieve objective A in order to be successful in achieving objective B. Following the successful achievement of objective B, learners could then pursue objective C. Other more complex objectives would follow in sequence. Learners should be successful in achieving each of these objectives; the teacher has arranged the objectives in a selected order whereby prerequisite learnings are always necessary to achieve the next goal sequentially. Gagné would stress the importance of problem solving activities for pupils as an ultimate goal.

Prior to achieving this objective, tasks would need to be analyzed in terms of behavioral objectives that pupils need to achieve in order to realize the desired end(s) sought. Thus, prior to engaging in problem solving activities, pupils may need to understand and know selected facts, concepts, and principles in a selected order or sequence. Pretests are given to determine where pupils are presently in terms of achievement pertaining to these facts, concepts, and principles. Results from the pretest then aid in determining what pupils need in terms of new learnings. Gagné then stresses the importance of deciding first of all what pupils are to learn. After deciding what pupils are to learn, prerequisites in a selected sequence are decided upon so that learners can ultimately achieve the desired ends. The teacher carefully guides pupils in achieving desired ends.

David Ausubel believes that deductive approaches in teaching pupils can be more effective than having pupils develop learning inductively. Ausubel would definitely be opposed to having pupils memorize content. He places more emphasis on products rather than processes in learning. Careful sequencing of meaningful learnings is important for pupils. Thus, Ausubel recommends that teachers guide pupils in developing learnings sequentially; meaningful learnings are to be achieved deductively by pupils.

Jerome Bruner emphasizes the importance of problem solving situations for pupils. Learners, having identified a problem, are then in a state of disequilibrium. The problem or problems must be solved to the learner's satisfaction in getting back to a state of equilibrium. To solve relevant problems, pupils need to acquire necessary facts, concepts, and generalizations. In problem solving activities, pupils are achieving through inductive or learning by discovery approaches in obtaining solutions

to problems. Thus, the pupil is sequencing his own learnings in learning experiences involving problem solving. Structural ideas identified by academicians can also be achieved and developed inductively by pupils using methods and procedures advocated by scholars in diverse academic disciplines.

B. F. Skinner stresses the importance of using programmed materials in order to achieve appropriate sequence in learning. Thus, the programmer or programmers would step by step continually present more difficult learnings to pupils whereby success basically would be in evidence for learners as they progress sequentially in learning. A model that pertains to programmed learning could be the following:

1. The pupil reads a sentence or several sentences and views a related picture.
2. The learner responds to an item relating to the printed content and illustration.
3. The pupil checks his response immediately before going on to the next item in sequence.

These steps in learning may be continually repeated with success generally being in evidence on the part of learners as they progress sequentially in learning. The sequential steps in learning move forward rather slowly so that success is an inherent part of learning on the part of pupils.

Logical Versus Psychological Sequence

One may think of sequence of learnings for pupils in terms of logical versus psychological order. The teacher, programmer, or writer of textbooks sequences learnings in terms of what appears to be easier to gradually more complex learnings for pupils. Materials may be tried out on groups of students to refine these materials so that sequential learnings will truly become a part of pupils.

In determining sequence psychologically, the learner would have latitude in selecting the order of what is to be learned. Thus, from the learners perception, understandings, skills, and attitudes would be developed sequentially.

In Conclusion

There are important questions that may be raised pertaining to sequencing learnings for pupils.

1. Who should sequence these learnings? The pupil? The teacher? Programmers of programmed materials?
2. How closely should learnings be sequenced? Should these learnings be carefully ordered as in programmed learning? Or, should these experiences be ordered in a more open-ended manner such as in problem solving activities?
3. Should the sequence be logically or psycholigically determined?
4. Which is the best approach in ordering experiences for pupils?

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CHAPTER SIX

EVALUATION OF ACHIEVEMENT

It is important to have a good program of evaluation so that achievement of learners may be effectively determined. Diagnosis of pupil achievement is also important in order to determine specifically where learners need guidance and assistance at a given point.

There are numerous questions which may be asked pertaining to evaluation.

1. Who should evaluate performance? The teacher? The pupil? The programmer? Parents?
2. How frequently should pupil achievement be assessed?
3. To what use should assessment results be put?
4. How should standardized tests be utilized to assess pupil achievement?
5. What is the role of parents in the evaluative process?
6. What facets of the learner should be evaluated?
7. What should be done with the resultant evaluations?

Evaluation and Programmed Learning

The programmer in programmed materials assesses pupil progress each step along the way as learners continually may read an item, respond to a question or test item, and then check their own responses. Almost immediately the child knows if he responded correctly or incorrectly. If the response was correct, the child is rewarded. If the response given was not correct, the learner knows almost immediately what the correct answer is. Thus, the pupil can continually evaluate his own achievement in terms of

answers for each response as determined by the programmer. This can well be one approach in having pupils assess their own achievement.

Self-evaluation and the Pupil

Pupils may also assess their own achievement in terms of criteria or standards developed cooperatively with the classroom teacher. The following criteria, as an example, may have been developed by pupils with teacher guidance in the area of creative writing:

1. new ideas in writing are in evidence and should be encouraged.
2. respect for the thinking of others is important.
3. capitalization, punctuation, spelling, and handwriting are not as important as content in writing.
4. creative writing is to be displayed only if the writer wishes to do so.

Thus, after a session devoted to creative writing has been completed, pupils with teacher guidance may evaluate if the above standards have been realized. Pupils in committees or individually could also assess if these criteria have been achieved. If the above standards have not been realized, pupils with teacher leadership need to discuss how these guidelines may be implemented in teaching-learning situations.

As a further example of pupils assessing their own achievement, the teacher could develop a rating scale relative to important objectives that pupils should achieve. Relevant behaviors should be selected by the teacher for the rating scale. Thus, the teacher may have written the following standards for pupils to react toward in the self-evaluation process:

Name_____ Date_____

Check the needed rating.	Yes	Often	Rarely	Never
1. I try to complete my work on time.				
2. I do the best that I can in school work.				
3. I help other children in school work.				
4. I try to get along well with others.				

The teacher may utilize the results from the rating scale in the following ways:

1. pupils may continually be assisted in achieving these ideals or objectives.
2. learners may guide their own behavior in terms of attempting to realize these stated objectives.
3. through teacher-pupil planning revisions and modifications can be made of these objectives.
4. through diagnosis, pupils with teacher guidance may determine areas of needed emphasis of selected criteria.

The teacher should certainly not scold pupils for the kind of responses made on the rating scale. Results from the rating scale should guide the teacher in doing a better job of teaching.

Checklists may also be utilized by pupils in assessing their own achievement. The teacher may write the following behaviors related to an ongoing unit of study; pupils may check the area or areas where guidance is needed to insure more optimum achievement in learning:

Name_____ Date_____

1. Need more help in using the card catalog.
2. Need more aid in utilizing the index as an aid to reading.
3. Need guidance in using the table of contents to locate information.
4. Desire aid in locating information in an encyclopedia.

The above behaviors could be stated more precisely such as in item number one above, "Need more help in utilizing the author card to locate information." The teacher may use results from the checklist to determine future learning needs of pupils. The teacher, of course, should also observe specific needs of pupils and thus plan objectives and learning activities to minimize these deficiencies.

Pupils may also evaluate their own progress involving the use of discussions. Thus, with teacher leadership, pupils could discuss additional learnings needed as a result of self evaluation. For example, following a lesson related to a language arts unit on word recognition skills, pupils may determine the following needs in reading as a result of using the discussion technique of appraisal:

1. more help is needed in identifying new words which lack consistency between symbol and sound, e.g., through, cough, rough, and bough.
2. more aid is needed in developing main ideas gained from reading.

Thus, the teacher may plan objectives and learning activities as a result of conducting conferences to aid pupils in evaluating their own achievement.

Teacher Prepared Tests to Assess Progress

The teacher may write valid test items pertaining to learnings developed by pupils. Test items written by the teacher must follow the following criteria:

1. Content in these items must be clearly written.
2. Test items must be written on the reading levels of pupils.

3. Pupils must have adequately developed writing vocabularies to respond effectively to essay items.

4. Tests should be long enough to evaluate an adequate number of learnings gained by pupils. Tests should not be too lengthy where tiredness and fatigue may set in on the part of learners when completing all needed responses.

5. All responses to each multiple choice item should be plausible or reasonable.

6. Items for a matching test should be homogeneous and relate to a specific topic. More responses should be contained in one column as compared to the second column to be used in matching. Thus, the process of elimination may not be used in matching column one with column two.

7. Test items should cover representative learnings gained by students from a lesson, part of a unit, or an entire unit of study.

8. Completion items should have ample necessary information so that learners truly reveal what has been learned. The following completion item lacks content and thus pupils cannot respond in a meaningful way:

   _____ is the _____ of _____.

9. Clues as to the correct response in a multiple choice item should not be in evidence. The stem in the following multiple choice item indicates which response is correct:

   Alaska is a

   (a) island (c) ocean
   (b) state (d) a, b, and c

10. Generally, an equal number of true and false test items should be inherent in a true-false test. Thus, for example, if a learner marks all responses true, fifty percent of the items will be marked correctly. The chances of guessing correctly on a true-false item is fifty percent.

Evaluation and Standardized Tests

Standardized achievement tests may be utilized to assess pupil achievement. These tests should be selected on the basis of validity and reliability.

Results from the taking of standardized tests should be analyzed and studied when making curricular decisions. No test, standardized or teacher-prepared, measures pupil achievement in a perfect manner. Thus, results from tests give teachers, principals, and supervisors selected data to be used in evaluating overall pupil achievement. Other data sources must also be utilized in evaluating pupil achievement.

Standardized achievement tests have the following advantages when used to assess pupil achievement:

1. It is one way, among others, to aid in evaluating pupil achievement.
2. Much time and expense generally has gone in to developing these tests as compared to the development of teacher made tests.
3. Individual pupil achievement can be compared against the norms of the test. Grade equivalents and/or percentiles are given pertaining to each learner's results from having taken the test.
4. Test makers have attempted to determine valid test items for all learners who will be taking the test.
5. Many attempts have been made generally in developing reliable test instruments.

Disadvantages in using standardized achievement tests can be the following:

1. Selected learners may not have had access to units of study related to specific test items.
2. Too many test items may require recall of information rather than critical thinking, creative thinking, and problem solving.
3. Skills in oral communication cannot be assessed when using standardized achievement tests.
4. Skills, for example, in using science equipment cannot be satisfactorily measured.

Diary Entries and Evaluation

A committee of pupils could record on a day to day basis what has been learned previously in a unit of study. Thus, the teacher may assess facts, concepts, generalizations, and main ideas developed by learners. The teacher can also evaluate abilities of pupils to retain what has been learned previously. Pupils then record learnings achieved each day and write content down as would be done in maintaining a diary.

Sociometric Devices

Not all techniques of evaluation measure the same trait of achievement. Standardized achievement tests, for example, attempt to measure academic achievement. Sociometric devices may be used to ascertain present status and achievement in social growth.

In utilizing sociometric devices, the teacher may ask pupils to respond to the following questions:

1. If you had a chance to study together with three other pupils, who would be your first choice, second choice, and third choice?
2. If you could choose three other pupils to play together with, who would be your first, second, and third choices?

Results from the sociometric device should be kept strictly confidential by the teacher. The teacher may get valuable data from the responses of pupils in the following ways:

1. The teacher can identify isolates and those being on the fringe area of having friends; these learners may then be guided in developing feelings of belonging to a group and class as a whole.
2. Committees can be formed as a result of noticing which pupils would like to work together.

There are weaknesses involved in using sociometric devices to assess pupil growth in social development:

1. Pupils may not always respond in terms of their true choices when listing preferences on paper pertaining to first, second, and third choices of classmates to study and play together with.

2. Friendships can be lasting among pupils; they may also change rapidly. These changes may occur shortly after the sociometric device has been utilized.

3. Selected learners may resent having to rate classmates in terms of first, second, and third choices.

Teacher Observation

Teacher observation may be utilized continuously to evaluate pupil achievement. This can be an effective technique to utilize in assessing pupil achievement. The following guidelines should be utilized when assessing pupil achievement using teacher observation:

1. Observations should be conducted in depth pertaining to each child's behavior. Attempts are then in evidence pertaining to getting accurate data of pupil behavior.

2. Data obtained through observations made should be recorded. Information pertaining to each pupil obtained through observation should be recorded accurately. Loaded, inaccurate terminology should not be used when writing these observations.

3. Recorded information should only be utilized by the teacher in doing a better job of teaching. After the recorded information has served its purpose in providing adequately for each child in the classroom, it, no doubt, should be destroyed.

4. When information is recorded pertaining to representative behavior of each pupil, the teacher must attempt to observe a pattern of interacting and reacting on the part of each learner.

What kinds of pupil behavior can be observed by the teacher? The following examples of learner behavior or lack of it can be observed by the teacher:

1. Pupils who complete assignments on time.
2. Interest in learning exhibited by pupils.
3. Learners volunteering to do additional work.
4. Pupil purpose in learning.
5. Respect for others revealed by learners.
6. The degree that pupils ask questions involving higher levels of thinking.
7. Pupil effectiveness in working on committees.
8. Improved performance in reading.
9. Relevant understandings, skills, and attitudes developed by learners.
10. Improvement over previous achievement in learning activities involving speaking.
11. Increased proficiency in listening.
12. Pupil proficiency being developed in writing for a variety of purposes.
13. Learners revealing understandings, skills, and attitudes developed through dramatizing, construction work, and art activities.

Thus, it is important for teachers to carefully observe pupil achievement. This would be true for the following reasons:

1. diagnosing pupil difficulties and working toward remedying deficiencies.
2. monitoring learner achievement in order to provide for continuous progress on the part of pupils.
3. determining the best objectives, learning experiences, and evaluation procedures for each child.
4. deciding why learners are not achieving to their optimum.

In Summary

A broad base of participation is necessary to evaluate pupil achievement satisfactorily. Thus, pupils, the teacher, parents, principals, and supervisors should be involved in this important task. Pupil achievement should be evaluated continuously. Results from the use of different evaluation techniques should be used to improve the curriculum. Learner achievement should be evaluated in the areas of intellectual, social, emotional, and physical development.

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